

2009 Wood Processor Report

Including Import and Export Information

Compiled from 2009 Wood Processor Reports
pursuant to 12 MRSA § 8884

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What is the purpose of the Wood Processor Report?

Each year, the Maine Forest Service collects information from Maine primary wood processors regarding the volume of wood processed in Maine. Information is also collected for volumes imported into Maine or exported from Maine.

This report summarizes, for 2009, the volume of wood harvested in Maine, processed by Maine mills, and imported into or exported from Maine.

Wood flow data is summarized for sawlogs, pulpwood, biomass chips, other miscellaneous products, and imports and exports.

How was this information collected?

In 2009, the Maine Forest Service received wood processor reports from 141 primary processing mills (sawmills, pulp and paper mills), 49 portable sawmills, 70 firewood dealers, 39 loggers and brokers who may have exported wood, 28 concentration yards, and 8 mills that burn some form of wood for energy. Volume information contained in these individual reports is confidential and by law shall not be made public, except that summary reports may be published using aggregated data which does not reveal the activities of an individual person or firm (12 MRSA §8884, sub-§3, "Forest Landowner and Wood Processor Reporting Requirements").

Interpreting Harvest, Export, Import, and Processed by the Maine Forest Products Industry

Maine wood processed

wood that is harvested in Maine and used by a Maine primary processing facility.

Exported from Maine without processing

wood that is harvested in Maine and exported out of state without processing by a Maine mill.

Imported from out of state

wood that is imported from out of state (not harvested in Maine) and processed by a Maine mill.

Total processed by Maine Forest Products Industry

total volume of wood processed in Maine, regardless of origin.

Definitions and Notes

1. Biomass Chips:

produced in the woods by chipping the entire tree, including branches and tops. Usually used as energy fuel, they may also be suitable for sludge composting, playground padding, and mulch.

2. Bole/Stem Pulp Chips:

produced in the woods by chipping the lower portion of the tree. These chips are not free of bark, but are suitable for use in pulp mills.

3. Cords (cfs):

a stack of fuel wood, pulpwood, or other material that measures 4 x 4 x 8 feet, or 128 cubic feet.

4. Construction and Demolition Waste (C and D Waste):

ground up wooden debris left over from construction and demolition that is burned by wood to energy facilities.

5. Firewood:

roundwood that is burned for home heating.

6. Hog Fuel:

any woody residue produced from mills, such as sawdust, bark or shavings, and used as energy fuel.

7. Pellets:

wood fuel generally made from dried wood fiber compressed into uniform diameter for burning.

8. Pulpwood:

roundwood that is used for the production of wood pulp. Generally sold as tree length, 16', 8' or 4' lengths.

9. Sawlogs:

a log that meets minimum standards of diameter, length, and defect, intended for sawing into boards or lumber. Includes sawlogs, studwood, pallet logs, boltwood, and veneer logs.

10. Sawmill residues:

clean, pulp-quality chips made from debarked slabs and edgings at sawmills. Used by pulp and paper mills to produce wood pulp.

11. Thousand Board Feet (MBF):

One thousand board feet. One board foot is the amount of wood contained in an unfinished board 1" thick, 12" long, and 12" wide.

Report Highlights



Maine's forest products industry consumed 14.1 million green ton equivalents in 2009, down from 15.8 million green ton equivalents in 2008. Seventy-nine percent of the supply (11.1 million green ton equivalents) was harvested in Maine, while 21% (3.0 million green ton equivalents) was imported.



Maine landowners harvested 13.6 million green ton equivalents of wood in 2009, down from 14.3 million green ton equivalents in 2008. Eighteen percent (2.5 million green ton equivalents) of the 2009 harvest was exported, up from 2008 (2.2 million green ton equivalents).



Maine's pulp and paper producers processed 7.5 million green tons of pulpwood, down 1.5 million tons (17%) from 2008 consumption. Seventy-four percent of the pulpwood originated from Maine's forests; 26% was imported.



Biomass harvesting volume was 3.3 million tons in 2009, up from 2008 (3.1 million tons). Biomass energy facilities consumed 3.8 million tons in 2009, up slightly from 2008. Seventy-nine percent originated from Maine's forests; 21% was imported.



Maine's sawlog processing in 2009 was .6 billion board feet, down from 2008 (.7 billion board feet).



During 2009, Maine's forest products industry imported 3.0 million green tons, while 2.5 million green tons were exported.



The harvest of spruce and fir was the lowest since before 1960. Hardwood harvest has increased by more than two times since 1960.

SAWLOGS

2009 Wood flow in Maine as reported to the Maine Forest Service (in MBF)

County	Spruce and Fir	White and Red Pine	Hemlock	Cedar	Other Softwood	Total Softwood	Beech	White Birch	Yellow Birch	Sugar Maple	Red Maple	Oak	Ash	Aspen	Other Hardwood	Total Hardwood	Total Sawlogs
ANDROSCOGGIN	75	8,905	658	1	0	9,639	81	75	195	215	72	290	86	43	2	1,059	10,698
AROOSTOOK	49,198	3,304	557	8,257	521	61,837	1,807	3,309	4,278	8,944	7,028	103	200	37,031	233	62,933	124,770
CUMBERLAND	356	15,053	2,233	1	4	17,647	55	92	97	73	174	688	67	14	2	1,262	18,909
FRANKLIN	5,102	6,399	184	115	20	11,820	393	1,400	606	1,797	572	924	394	44	129	6,259	18,079
HANCOCK	10,327	4,405	1,327	255	123	16,437	63	636	153	304	162	214	223	29	471	2,255	18,692
KENNEBEC	843	10,184	961	62	2	12,052	145	689	242	645	178	820	258	118	1	3,096	15,148
KNOX	258	14,620	55	4	0	14,937	1	24	4	14	13	61	9	9	1	136	15,073
LINCOLN	552	11,583	2,081	5	0	14,221	10	20	2	53	23	67	16	1	3	195	14,416
OXFORD	11,841	28,394	2,217	56	9	42,517	398	897	789	2,721	1,382	952	410	27	60	7,636	50,153
PENOBSCOT	34,021	8,603	14,552	1,700	106	58,982	200	1,940	2,102	4,131	1,210	1,134	1,014	2,225	355	14,311	73,293
PISCATAQUIS	31,763	4,303	2,289	315	68	38,738	754	2,178	2,888	5,407	1,375	187	508	675	242	14,214	52,952
SAGadahoc	29	1,727	108	1	0	1,865	0	0	0	1	1	8	5	2	0	17	1,882
SOMERSET	39,015	11,212	553	459	25	51,264	1,027	2,634	3,140	4,620	1,433	1,447	1,132	69	115	15,617	66,881
WALDO	598	6,038	357	55	8	7,056	21	160	23	49	36	188	28	80	0	585	7,641
WASHINGTON	21,192	3,121	475	534	103	25,425	37	91	132	209	149	43	156	1,044	385	2,246	27,671
YORK	12	14,279	421	0	14	14,726	19	10	6	21	73	638	13	1	3	784	15,510
Maine wood processed:	205,182	152,130	29,028	11,820	1,003	399,163	5,011	14,155	14,657	29,204	13,881	7,764	4,519	41,412	2,002	132,605	531,768
Exported from Maine without processing:	134,838	43,666	779	8,608	2	187,893	63	2,811	9,507	23,674	6,714	8,733	3,368	228	1,042	56,140	244,033
Total harvested from Maine forests:	340,020	195,796	29,807	20,428	1,005	587,056	5,074	16,966	24,164	52,878	20,595	16,497	7,887	41,640	3,044	188,745	775,801
Imported from out of state:	6,446	52,174	89	372	0	59,081	1	1,229	275	859	133	140	62	0	997	3,696	62,777
Total processed by Maine Forest Products Industry:	211,628	204,304	29,117	12,192	1,003	458,244	5,012	15,384	14,932	30,063	14,014	7,904	4,581	41,412	2,999	136,301	594,545

- Notes:**
1. Sawlogs include logs, veneer, boltwood, studwood, palletwood, etc. Green ton converted to MBF @ 5 green tons = 1 MBF.
 2. Other Softwood includes larch, pitch pine, and others.

PULPWOOD

2009 Wood flow in Maine as reported to the Maine Forest Service (in Green Tons), including both solid wood and bole/stem pulp chips (Totals do not add up due to rounding)

County	Spruce and Fir	White and Red Pine	Hemlock	Cedar	Other Softwood	Total Softwood	Aspen	Other Hardwood	Total Hardwood	Mixed Wood	Total Pulpwood
ANDROSCOGGIN	648	24,839	15,046	0	4,147	44,680	3,097	21,925	25,022	0	69,702
AROOSTOOK	95,295	360	41,206	0	610	137,471	41,083	761,047	802,130	0	939,601
CUMBERLAND	1,387	79,903	34,782	0	2,080	118,152	1,918	24,439	26,357	0	144,509
FRANKLIN	58,713	17,723	22,617	0	2,675	101,728	27,091	246,006	273,097	0	374,825
HANCOCK	72,568	13,553	33,846	0	5,159	125,126	27,063	34,557	61,620	0	186,746
KENNEBEC	9,474	29,990	23,871	0	4,027	67,362	8,305	31,004	39,309	0	106,671
KNOX	15,085	6,395	2,384	0	324	24,188	1,944	5,137	7,081	0	31,269
LINCOLN	4,520	25,347	8,848	0	1,297	40,012	2,241	4,253	6,494	0	46,506
OXFORD	46,677	129,803	67,912	0	7,600	251,992	12,747	274,148	286,895	0	538,887
PENOBSCOT	176,910	26,432	220,075	0	3,476	426,893	63,665	474,459	538,124	0	965,017
PISCATAQUIS	149,867	9,584	56,103	0	1,248	216,802	33,743	361,948	395,691	0	612,493
SAGadahoc	778	6,992	5,295	0	611	13,676	722	2,145	2,867	0	16,543
SOMERSET	194,034	58,657	59,972	0	3,498	316,161	40,071	650,521	690,592	0	1,006,753
WALDO	23,251	30,504	9,661	0	1,149	64,565	8,244	22,518	30,762	0	95,327
WASHINGTON	106,554	3,944	53,652	0	2,741	166,891	28,827	190,352	219,179	0	386,070
YORK	45	48,517	17,923	0	712	67,197	1,017	13,435	14,452	0	81,649
Maine wood processed:	955,806	512,543	673,193	0	41,354	2,182,896	301,778	3,117,894	3,419,672	0	5,602,568
Exported from Maine without processing:	567,847	1,178	14,492	0	8,178	591,695	25,685	514,578	540,263	0	1,131,958
Total harvested from Maine forests:	1,523,653	513,721	687,685	0	49,532	2,774,591	327,463	3,632,472	3,959,935	0	6,734,526
Imported from out of state:	342,072	309,746	142,138	0	24,255	818,211	114,579	1,001,410	1,115,989	0	1,934,200
Total processed by Maine Forest Products Industry:	1,297,878	822,289	815,331	0	65,609	3,001,107	416,357	4,119,304	4,535,661	0	7,536,768

SAWMILL RESIDUE

Green Tons

7,760
10,248
314
37,315
0
38
0
0
8,950
3,837
94,268
75
22,228
0
0
3,924
188,957
68,179
257,136
44,313
233,270

Sawmill residues are clean, pulp-quality wood chips made from slabs and edgings at sawmills. The volume is reported here as an additional input to the pulp and paper mills and pellet mills. Sawmill residues are a by-product of the sawing process, and are not included as additional harvest volumes from Maine's forests.

Pulpwood Notes:

1. Other Softwood is comprised of bole chips of which specific species information was not collected.
2. Aspen volumes are based upon pure loads.
3. Other Hardwood is comprised of all hardwood species except aspen sold in pure loads.

2009 Wood Flow in Maine as reported to the Maine Forest Service (in Green Tons)

County	BIOMASS CHIPS	Further utilization of wood already tallied.	C AND D WASTE	FIREWOOD / PELLET* CORDS
		HOG FUEL		
Androscoggin	176,712	1,127	22,617	147
Aroostook	503,598	147,275	3	7,072
Cumberland	96,421	27,177	0	2,533
Franklin	440,844	17,911	0	764
Hancock	94,961	0	0	754
Kennebec	95,492	19	1,362	1,360
Knox	36,982	0	0	572
Lincoln	90,725	0	2,011	706
Oxford	185,160	27,573	0	2,091
Penobscot	311,780	81,017	1,149	5,059
Piscataquis	230,272	22,974	1,496	18,338
Sagadahoc	32,788	387	0	32
Somerset	263,182	25,700	357	1,829
Statewide*	0	0	0	6,394
Waldo	57,649	4,353	0	1,473
Washington	268,266	4,500	0	596
York	103,862	11,494	4,160	953
Maine wood processed:				50,673
Exported from Maine without processing:				3,313
Total harvested from Maine Forests:				53,986
Imported from out of state:				0
Total processed by Maine Forest Products Industry:				50,673

*Volumes reported with no indication of originating county were identified as Statewide volume.

Wood Imports and Exports

<u>Import Origins</u>	<u>Export Destinations</u>
<u>States:</u>	<u>States:</u>
Connecticut	Connecticut
Maryland	Indiana
Massachusetts	Michigan
New Hampshire	New Hampshire
New York	New York
Ohio	Vermont
Rhode Island	Virginia
Vermont	Washington
<u>Provinces:</u>	<u>Provinces:</u>
New Brunswick	New Brunswick
Nova Scotia	Nova Scotia
Ontario	Quebec
Quebec	<u>Countries:</u>
	China
	Europe

* This is the second Wood Processor Report to separately report firewood as a new product. Report forms were sent to known firewood dealers. In the past some firewood was uniquely identified and reported to MFS as an export, and MFS grouped these minor volumes into the pulpwood product. This by no means a complete accounting of the volume of processed firewood merchandized, sold, or distributed within Maine, or as an export or import. The only previous estimation of annual firewood consumption is a survey conducted by the State Planning Office in the early 1990's. That survey estimated an annual processing, sale, distribution and consumption of 400,000 cords. MFS will continue to improve its survey methods in order to obtain a consistent and reliable estimate of annual firewood processing.

In addition, this is the second year we have received reports from Maine's pellet mills. We have included reported volumes for pellet production under this section also.

SUMMARY**2009 Wood flow in Maine as reported to the Maine Forest Service**

Product	Harvest, Export, Import, Instate Processing	Total Volume in 2009	Total Volume in Green Tons
Sawlogs (in MBF) 1 MBF = 1,000 board feet <i>Note on conversions: see conversion table at the end of report</i>	a. Maine wood processed	531,768	2,336,764
	b. Exported from Maine without processing	244,033	1,078,344
	c. Total harvested from Maine forests (a+b=c)	775,801	3,415,108
	d. Imported from out of state	62,777	271,789
	f. Total processed by Maine Forest Products Industry (a+d=e)	594,545	2,608,553
Pulpwood (in green tons)	a. Maine wood processed	5,602,568	5,602,568
	b. Exported from Maine without processing	1,131,958	1,131,958
	c. Total harvested from Maine forests (a+b=c)	6,734,526	6,734,526
	d. Imported from out of state	1,934,200	1,934,200
	f. Total processed by Maine Forest Products Industry (a+d=e)	7,536,768	7,536,768
Biomass Chips (in green tons)	a. Maine wood processed	2,988,694	2,988,694
	b. Exported from Maine without processing	276,807	276,807
	c. Total harvested from Maine forests (a+b=c)	3,265,501	3,265,501
	d. Imported from out of state	800,425	800,425
	f. Total processed by Maine Forest Products Industry (a+d=e)	3,789,119	3,789,119
Firewood / Pellets (in cords) <i>Note on conversion: 1 cord = 2.5 green tons</i>	a. Maine wood processed	50,673	126,683
	b. Exported from Maine without processing	3,313	8,283
	c. Total harvested from Maine forests (a+b=c)	53,986	134,965
	d. Imported from out of state	0	0
	f. Total processed by Maine Forest Products Industry (a+d=e)	50,673	126,683
Totals (in green tons)	a. Maine wood processed		11,054,709
	b. Exported from Maine without processing		2,495,391
	c. Total harvested from Maine forests (a+b=c)		13,550,100
	d. Imported from out of state		3,006,414
	f. Total processed by Maine Forest Products Industry (a+d=e)		14,061,123

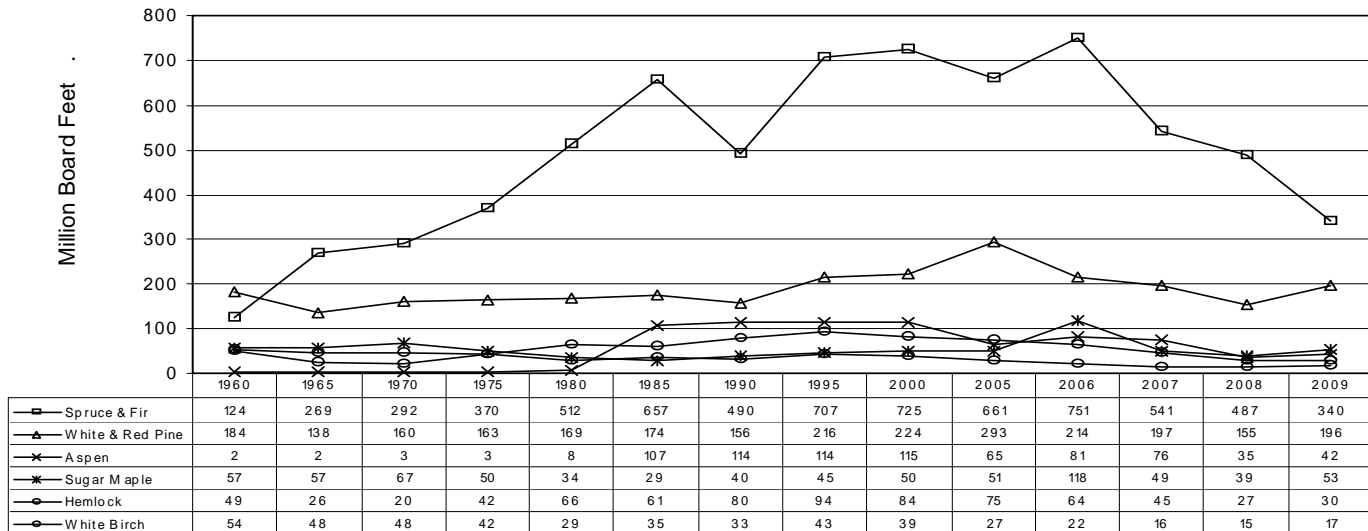
Wood Harvesting Trends (1960-2009)

The Maine Forest Service has been collecting data on volume of wood harvested since the late 1940's. The following three charts illustrate wood harvesting trends over the past 49 years.

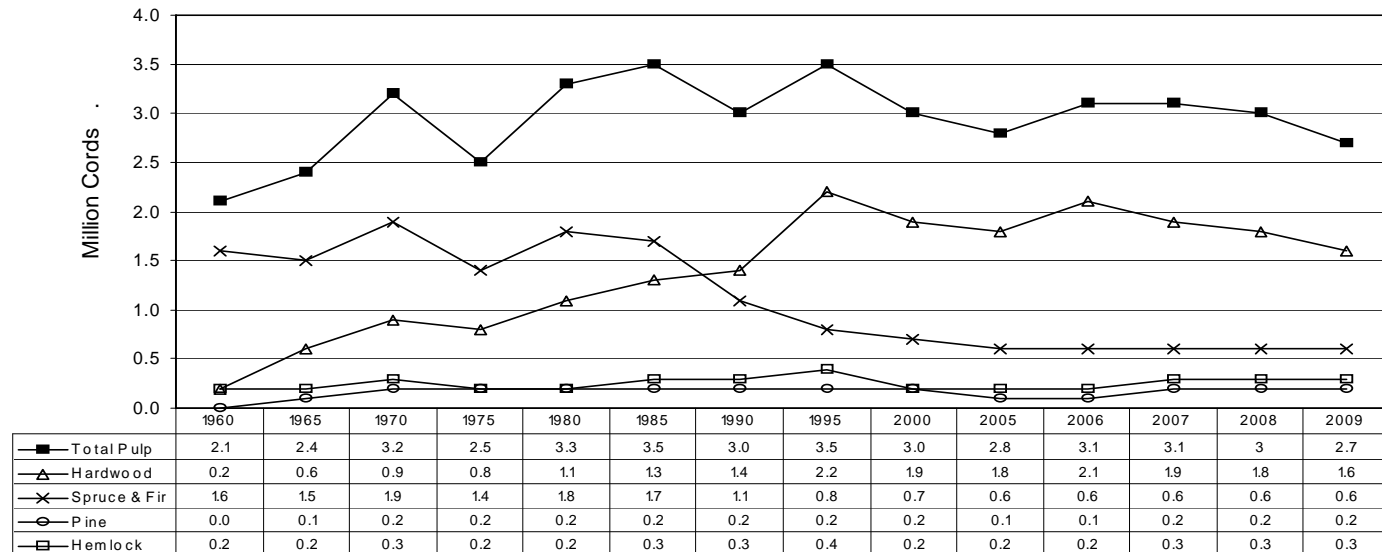
The two graphs to the right show the harvest volumes for selected species for sawlogs and pulpwood. These volumes include exported volumes.



Harvest Levels of Selected Species for Saw logs in Maine (1960 to 2009)



Harvest Levels of Selected Species for Pulpwood in Maine (1960 to 2009)



Wood Harvesting Trends (1960-2009)

The graph to the right shows the volumes for commercially important species.

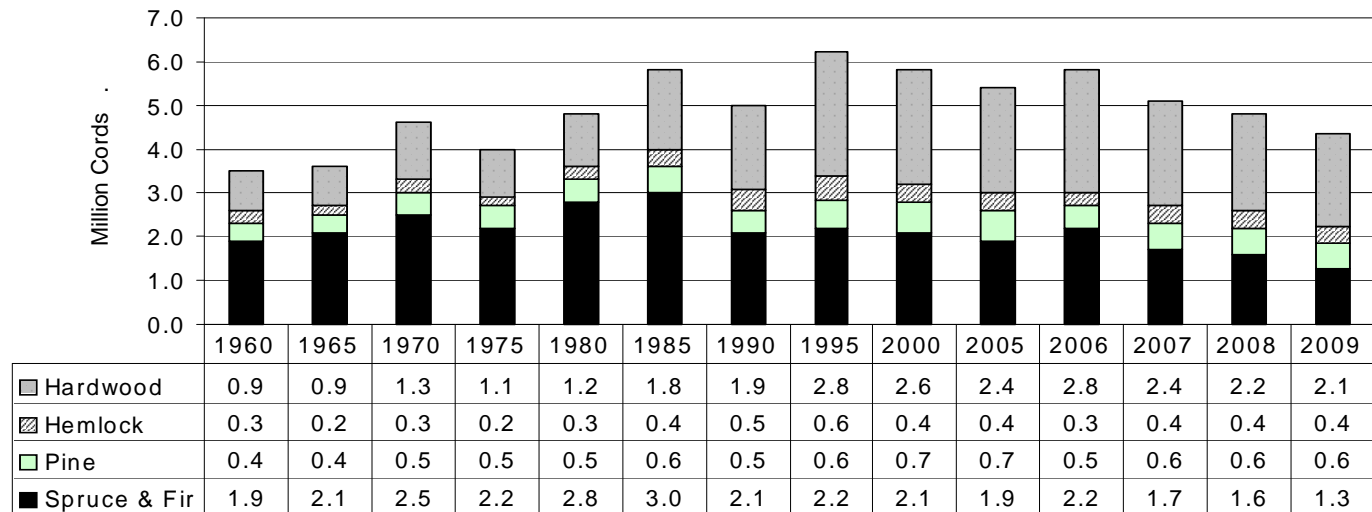


Import and Export Trends (1990-2009)

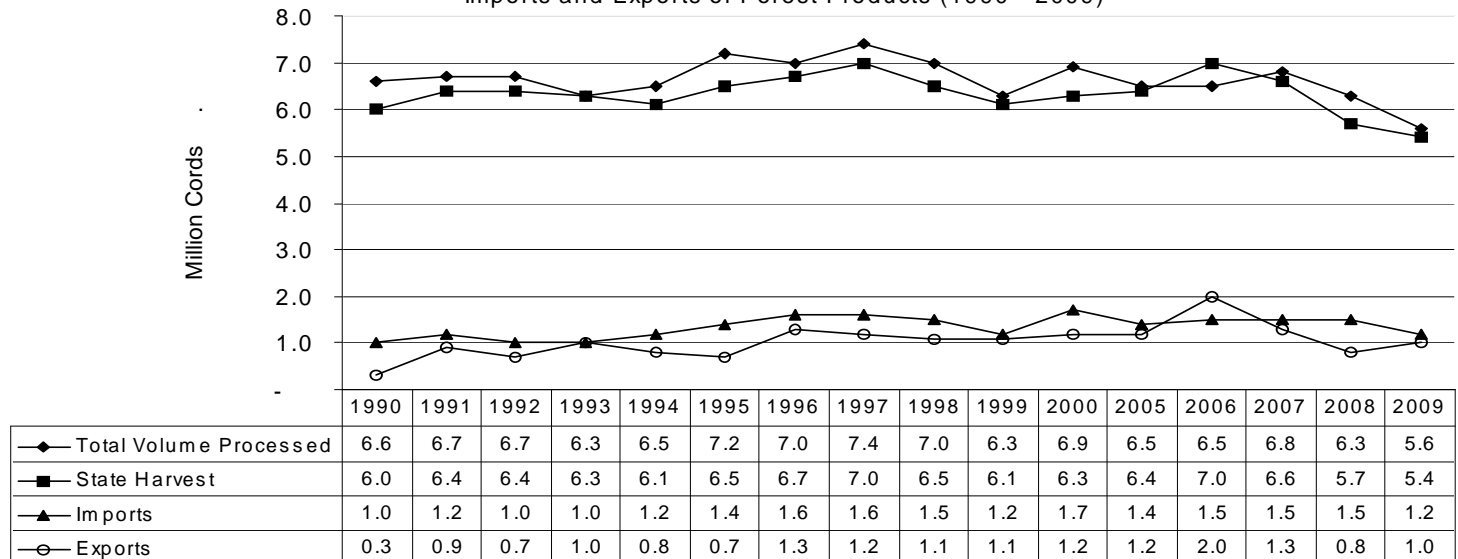
The graph to the right shows the volumes of forest products being exported from Maine, imported into Maine, and processed within Maine.



Harvest Commercially Important Species in Maine (1960 - 2009)



Imports and Exports of Forest Products (1990 - 2009)



Conversion Table **MBF/Weight Equivalents** **for various Maine Commercial Tree Species**

These conversions are used by the Maine Forest Service.

Users of this report may wish to confirm the conversion rate(s) used by individual mills and/or contractors who purchase wood.

<u>Species</u>	<u>MBF</u>	<u>Tons</u>
Spruce Fir	1	4.2
White Pine	1	4.3
Red Pine	1	4.3
Hemlock	1	4.8
Cedar	1	3.4
Tamarack (Larch)	1	4.8
Beech	1	4.5
White Birch	1	4.5
Yellow Birch	1	5.4
Sugar Maple	1	5.4
Red Maple	1	4.5
White Oak	1	5.4
Red Oak	1	5.4
Ash	1	4.5
Aspen/Poplar	1	4.3
Softwood	1	4.6
Hardwood	1	5.4
Mixed Wood	1	4.6

For purposes of comparing volumes, a rough conversion of 1 MBF = 2 cords is commonly used.

These conversions factors are handy for making estimates and for forest inventory purposes, but are advisory only. The weight of a particular volume of wood varies greatly by species, time of year and other factors.

It is illegal in Maine to convert from one system of measurement to another for the basis of payment (e.g. convert a mill payment for pulpwood in dollars per ton to a landowner payment in dollars per cord).



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Maine Forest Service District Foresters

The Maine Forest Service has 10 District Foresters who provide technical assistance and educational services to landowners, loggers, schools and educational institutions, municipalities and other stakeholders. District Foresters conduct educational workshops, field demonstrations, media presentations, and can provide limited one-on-one contact with individual landowners.

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